

IS LABIA MINOR DOUBLE-BROODED?

By MALCOLM BURR, D.Sc., F.R.E.S.

It is always stated in the books that the Lesser Earwig is most frequently observed flying on hot June days in the neighbourhood of manure heaps. I remember how in my cricketing days I often used to catch *Labia minor* flying past me when out in the deep field.

The fact that it flies so freely in the sunshine and that it is mature in June distinguish it sharply from the Common Earwig. Also, while the genus *Forficula* is dominantly Palaearctic, the genus *Labia* is tropical in distribution. *L. minor* ranges right through Africa, and across from England to Vladivostok. It is the only species of the family *Labiidae*, of which there are several dozen species, that occurs in Europe.

Yet, with all these distinctions, it is a neglected insect, and, so far as I am aware, practically nothing is really known of its life history.

Professor Kosswig has brought me a tube containing three males, three females and three larvae, which he found in a rotten palm trunk in the garden at Balta Liman, on the shore of the Bosphorus, in November.

Now the larvae of the Common Earwig become mature in August, after which date larvae are not to be found.

Although the early summer has been so far regarded as the normal season for the adult *L. minor*, their occurrence in the late autumn is not unknown. I remember one October about thirty years ago, when there was a spell of very warm, muggy weather, *L. minor* turned up in conspicuous numbers. I cannot now recall the year, but Mr Donisthorpe may remember. He noticed the occurrence, and found them flying to street lamposts.

It seems to me that the explanation may be that the Lesser Earwig is double-brooded.

There is scope here for some interesting observation. If any reader comes across a colony of *Labia minor*, will he please start some breeding experiments?

[My only Glos. record of *L. minor* is one at Darlingworth, 3.iv.43 (Shaw): this may indicate a hibernated adult.—T. B. F.]

THE LEPIDOPTERA OF SHETLAND.

By BRYAN P. BEIRNE, Ph.D., M.R.I.A., F.R.E.S.

The following list of the species of Lepidoptera occurring in Shetland was compiled when studying the distribution of the British Lepidoptera recently (see *Proc. R. Irish Acad.*, 47B: 91-101). It is probably not complete but includes all the species recorded in the British entomological periodicals I had available, and, as no reasonably complete list of the Shetlandic Lepidoptera has been published previously, it may be of some use to future collectors in those islands, particularly in drawing attention to the many species requiring confirmation, until such time as a full list is published by someone with personal experience of collecting in Shet-

land. It is hoped that some readers of the *Entomologist's Record* will be able to publish additional information concerning some of these doubtful species, while confirmation of many of the reliably-recorded species is also desirable, as in a relatively large proportion of cases only single records exist; this applies particularly to the Microlepidoptera. The Shetlandic Lepidoptera will repay further study, as a greater proportion of the species exhibit local variation than do the species in any other area of the British Isles.

I have been unable to find the original records, if any, for the following species, stated to occur in Shetland by South (*Moths Brit. Is.*): *Tethea* or, *T. duplaris*, *Euxoa tritici*, *Apamea oblonga* (*abjecta*), *A. anceps* (*sordida*), *Rhizedra lutosa*, *Xylina vetusta*, *Scoliopteryx libatrix*, *Thera juniperata* and *Epirrhoe tristata*. Meyrick (*Rev. Handb. Brit. Lep.*) includes in addition: *Pieris brassicae*, *P. rapae*, *Coenonympha pamphilus*, *Agrochola circellaris*, *Colostygia salicata*, *Operophtera brumata*, *Philedone prodromana*, *Epiblema semifuscana*, *Hemimene acuminatana*, *Eupista crocogramma* and *Eriocrania semipurpurella*. Most of the above species are also included by Barrett (*Lep. Brit. Is.*), who also gives *Bombycia viminalis* and *Eupithecia pulchellata*. The records for *B. viminalis*, *T. juniperata* and *E. tristata* are almost certainly correct, as Barrett mentions that these species are represented by local forms in Shetland, but confirmation of the remaining species is desirable. Wolff (*Zoology of the Faroes*, II) gives a list of the Shetlandic species and includes the following for which I can find no other records: *Diarsia brunnea*, *Meristis trigrammica*, *Poecilopsis lapponaria*, *Hydriomena furcata* (*sordidata*), *Crambus furcatellus*, *Cnephasia bellana* (*penziana*) and *Agonopteryx* (*Depressaria*) *applana*. Confirmation of *P. lapponaria* is particularly desirable.

The following are some other species requiring confirmation:—

Polyommatus agestis race *artaxerxes*: According to Walker (*Ent. Mo. Mag.*, LVIII: 1) this was taken on Unst by W. Claridge Druce, a botanist.

Lasiocampa quercus: Not previously recorded from Shetland. There is a male labelled "Unst, 14.viii.89" in the collection of Mr M. S. D. Westropp, of Dublin, but with no indication of the captor's name. The specimen is a variety in which the yellow of the hindwings does not form a narrow band but extends to the edge of the wing; the forewings are similar but somewhat darkened towards the edge and tip. Is the specimen a representative of a Shetlandic local race?

Parasemia plantaginis: According to Newman (*Proc. S. Lond. N.H. Soc.*, 1912: 100) this species died out in Shetland some time prior to 1912 owing to attacks by ichneumons. Has it been seen since?

Eulype hastata: Recorded by Tugwell (*Ent. Mo. Mag.*, XXVII: 83), and probably correct, but is it *hastata* or *subhastata*?

Agonopteryx (*Depressaria*) *badiella*: recorded by King, Bright and Reid (*Ent. Mo. Mag.*, XXXII: 5), but the record is queried by Meyrick. Is this the species Wolff records as *applana*?

Aegeria muscaeformis: Briggs (*Entom.*, XVII: 200) records finding a large mine in the roots of Thrift such as is made by the larva of this species. Has the adult ever been taken?

Records almost certainly incorrect are: *Eupithecia nanata*, which has been recorded by several of the older collectors, but there seems to be

little doubt that the specimens were the local forms of *E. venosata* or of *E. satyrata*, and *Zygaena exulans*, stated to occur in Shetland by Rowland-Brown (*Entom.*, LII: 217), but Curwen (*ibid.*, LIII: 17) is of the opinion that the specimens were incorrectly labelled.

All the following species are apparently reliably recorded from Shetland, but it is possible, however, that there has been some confusion between the species of *Scoparia*, *Cnephasia* and *Hemimene*. Only single records exist for many of the species, and in all cases confirmation would be useful. Thus, Shetland is apparently the only known British locality for *Cataplectica auromaculata*, but I can find no records for this species during the past sixty years. In all cases further information on the variation exhibited by Shetlandic specimens is desirable. Species known to exhibit local variation in Shetland are marked with an asterisk.

- Aglais urticae*.
Nymphalis antiopa.
Vanessa cardui.
V. atlanta.
Coenonympha tullia.
Acherontia atropos.
Herse convolvuli.
Celerio galii.
Macroglossum stellatarum.
Leucoma salicis.
Parasemia plantaginis.*
Apatele euphorbiae.*
Agrotis ipsilon (suffusa).
Euxoa cursoria.*
E. nigricans.*
Lycophotia varia (strigula).*
Peridroma porphyrea.
Ammogrotis lucerneae.*
Rhyacia simulans.*
Amathes alpicola (alpina).*
A. glareosa.*
A. c-nigrum.
A. xanthographa.*
Diarsia festiva.*
Triphaena orbona.
T. pronuba.
Eurois occulta.*
Polia tinctoria.*
Mamestra brassicae.
Diataraxia oleracea.
Hadena nana (dentina).*
H. conspersa.*
Cerapteryx graminis.*
Dasypolia templi.*
Eumichtis adusta.*
Phlogophora meticulosa.
Apamea exulis.*
A. furva.
A. obscura (gemina).
A. sordens (basilinea).
A. monoglypha.
A. secalis (didyma).
Procus fasciuncula.
Celaena haworthii.*
C. leucostigma.
Hydraecia micacea.
Leucania pallens.
Caradrina clavipalpis (quadripunctata).
Orthostia gothica.
- Anarta melanopa*.*
Plusia gamma.
Carsia paludata.
Eulypé hastata (see above).
Lygris testata.*
Dysstroma citrata (immanata).*
Chloroclysta niata.
Xanthorhoë munitata.*
X. montanata.*
X. fluctuata.*
Colostygia didymata.*
Entephria caesiata.*
Euphyia bilineata.*
Perizoma albulata.*
P. blandiata.*
Eupithecia venosata.*
E. satyrata.*
Hepiatus humuli.*
H. fusconebulosa (velleda).*
H. lupulina.
Crambus pascuellus.
C. pratellus.
C. culmellus.
C. hortuellus.
C. perlellus.
Nomophila noctuella.
Pyrausta cespitalis.*
Scoparia alpina.*
S. angustea.
S. mercurea (frequentella).
S. ambigua (atomalis).
Phalonia cnicana.
P. ciliella.
Philedone gerningana.
Euxanthis angustana.*
Tortrix rusticana.
T. musculana.*
Cnephasia osseana.*
C. colquhounana.*
C. octomaculana.*
Peronea aspersana.
Ancylys unguicella.
Eucosma murcuriana (mercurinana).
Bactra lanceolana.
Endothenia antiquana.
Polychrosis dubitana (littoralis).*
Argyroploce schulziana.*
A. lacunana.
Hemimene plumbagana.

<i>H. tanacetii</i> .*	<i>A. fabriciana</i> .*
<i>H. consortana</i> .	<i>Glyphipterix thrasonella</i> .
<i>Laspeyresia succedana</i> (<i>ulicetana</i>).*	<i>Elachista eleochariella</i> .
<i>Aristotelia tenebrella</i> .	<i>E. rhynchosporella</i> .
<i>Bryotropha terrella</i> .*	<i>Caloptilia</i> (<i>Gracilaria</i>) <i>syringella</i> .
<i>Gelechia betulea</i> (<i>ericetella</i>).	<i>C. tringipennella</i> .
<i>Phthorimaea plantaginella</i> .*	<i>Cataplectica auromaculata</i> .
<i>Mompha locupletella</i> .	<i>Plutella maculipennis</i> .
<i>Endrosis lactella</i> .	<i>P. annulatella</i> .
<i>Borkhausenia pseudospretella</i> .	<i>P. senilella</i> (<i>dalella</i>).
<i>Agonopteryx</i> (<i>Depressaria</i>) <i>badiella</i> (see above).	<i>Monopis rusticella</i> .
<i>Anthophila pariana</i> .	<i>Tinea ganomella</i> (<i>lapella</i>).
	<i>Ochsenheimeria bisontella</i> .

COLEOPTERA AT LAMPTON, MIDDLESEX.

By HORACE DONISTHORPE, F.Z.S., F.R.E.S., etc.

(Continued from page 29.)

HYDROPHILIDAE—*Helophorus rugosus*, Ol., *Sphaeridium bipustulatum*, F., *Cercyon lateralis*, Marsh., *C. terminatus*, Marsh., *Megasternum boletophagum*, Marsh., *Cryptopleurum atomarium*, Ol., all in vegetable refuse.

STAPHYLINIDAE—*Aleochara fuscipes*, F., under dead rat; *A. bipunctata*, Ol., *A. crasicornis*, Bois., in vegetable refuse & (Carrion), *A. crassiuscula*, Sahlb., *A. nitida*, Gr., *Oxytropa haemorrhoea*, Staph., *Atheta analis*, Gr., *A. indubia*, Shp., *A. longicornis*, Gr., all in vegetable refuse; *Atheta sordida*, Marsh., *A. nigra*, Shr., *A. laticollis*, Steph., *A. fungi*, Gr., *A. sericea*, Muls., *A. aterrima*, Gr., *A. palustris*, Kies., *A. orbata*, Er., all in vegetable refuse; *Falagria concinna*, Er., evening sweeping; *F. sulcata*, Pk. (all black specimens), both in vegetable refuse; *F. obscura*, Gr., *Oligota parva*, Kr. (abundant), *O. pusillima*, Gr., all in vegetable refuse; *Hypocyrtus longicornis*, Pk., sweeping; *Conosoma immaculatum*, Steph., *Tachyporus chrysomelinus*, L., *T. hypnorum*, F., *T. pusillus*, Gr., *T. brunneus*, F., all in vegetable refuse; *Cilea silphoides*, L., *Quedius mesomelinus*, Marsh., *Q. cruentus*, Ol., beating hawthorn blossoms, and in vegetable refuse; *Q. cinctus*, Pk., *Q. tristis*, Gr., *V. oblitteratus*, Er., *Q. rufipes*, Gr., all in vegetable refuse; *Ocytus olens*, Müll., under stones; *O. ater*, Gr., *O. compressus*, Marsh., *Philonthus aeneus*, Ross., *P. politus*, F., *P. varius*, Gyll., *P. fimetarius*, Gr., *P. cephalotes*, Gr., *P. sordidus*, Gr., *P. concinnus*, Gr., all in vegetable refuse; *Philonthus longicornis*, Steph., *P. jurgans*, Tott., *P. debilis*, Gr., *P. discoideus*, Gr., *Gabrieus nigritulus*, Gr., *G. stipes*, Sharp, *G. bishopi*, Sharp, *Xantholinus glabratus*, Gr., *X. punctulatus*, Pk., *X. longiventris*, Heer, *Leptacinus parumpunctatus*, Gyll., *L. batyehrus*, Gyll., *L. linearis*, Gr., *Stilicinus affinis*, Er., *Scopaeus abbreviatus*, Dej. & Muls., *Sunius diversus*, Aub., *Stenus rogeri*, Kr., all in vegetable refuse; *S. similis*, Hbst., *S. paganus*, Er., both sweeping; *Platystethus arenarius*, Fourc., *Oxytelus rugosus*, F., *O. inustus*, Gr., *O. nitidulus*, Gr., *O. complanatus*, Er., *Homalium excavatum*, Steph., *H. caesum*, Gr., all in vegetable refuse; *H. rufipes*, Fourc., beating blossoms; *Megarthus denticollis*, Beck, in vegetable refuse.

SILPHIDAE—*Silpha sinuata*, F., under dead rat.